UNITED STATES PATENT AND TRADEMARK OFFICE

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09/552,589	04/19/2000	Masato Ochiai	35.C14438	4086

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EXAMINER
GYORFI, THOMAS A

ART UNIT	PAPER NUMBER
2135	

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5,10-28,33,37-57 and 61-70* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5,10-28,33,37-57 and 61-70* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date *5/24/05*.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1, 3, 5. 10-28, 33, 37-57, and 61-70 remain for examination. The

correspondence filed 5/24/05 added, amended, and canceled no claims.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/24/05

has been entered.

Response to Arguments

3.   Applicant argues, "The status indicators allow a user to modify the search in

order to facilitate the job, but do not indicate which elements of the search were

successfully located. Therefore, Salgado et al. fails to teach or suggest the second

request means or the output means of claim 1." Examiner disagrees with this

contention, as the user (being the recognition means) is inherently capable of identifying

at least one device and determining whether to begin a second search. In addition, it

must be noted that as claim 1 was rejected in view of Salgado and Lizee, and whereas

Lizee discloses the second request means, Applicant's argument amounts to an attempt

to show nonobviousness by attacking references individually where the rejections are

based on combinations of references. See *In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).*

4.   Applicant argues, "*Additionally, Applicants believe that Lizee et al. is unrelated to the subject matter of Claim 1, because it is directed towards an Automatically Relaxable Query (ARQ) system and not a database device search system.*" Examiner disagrees with this contention. Lizee is directed toward the general problem of querying a database, and is universally practicable on any system that requires the ability to query a database (see also col. 1, lines 15-35), which would include both the instant application and the cited prior art.

5.   The remainder of Applicant's arguments, see the RCE filed 5/24/05, with respect to the rejection(s)of claim(s) 1, 3, 5. 10-28, 33, 37-57, and 61-70 under Salgado and Lizee (along with other references as previously indicated) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Salgado, Lizee, and Gauch.

Claim Rejections - 35 USC § 103

6.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7.   Claims 1, 3, 5, 10, 12, 15, 17-19, 21, 24, 28, 33, 44, 46, 50, 55-57, 61, 63-65, and 67-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salgado et al (U.S. Patent 5,872,869) in view of Lizee et al. (U.S. Patent 5,671,404), and further in view of Gauch et al. ("Search Improvement via Automatic Query Reformulation").

Referring to Claims 1, 10, 19, 28, 44, 55, 56:

Salgado discloses a device search system comprising a server unit and a client

unit (col. 13, lines 30-45), wherein said client unit comprises: first request means for

requesting said server unit to execute a first search in accordance with a number of

attributes in order to search for a desired device on a network (col. 19, lines 5-10);

recognition means for recognizing whether result information obtained from the first

search shows a presence or an absence of at least on device obtaining means for

obtaining at least one attribute for use in a second search from the number of attributes

for the first search (the user, col. 20, lines 20-55); second request means for requesting

said server unit to execute a second search in accordance with a part of the number of

attributes used for the first search in order to search for a desired device on the network

(col. 19, lines 12-20, 35-40), recognition means for recognizing whether result

information obtained from the first search executed by said server unit shows a

presence or an absence of at least one device (the user, col. 20, lines 20-55) and output

means for outputting a search result from the first search when the recognition means

recognizes that the result information shows the presence of at least one device (col.

19, lines 38-43), and for outputting a search result from the second search, which

shows, for each device completely meeting attributes used for the second search, that

the device meets the attributes used for the second search (col. 22, lines 49-62), and

shows, for each device incompletely meeting the attributes used for the second search,

at least one of the attributes that the device meets and a remainder of the attributes

distinguishably from each other (col. 22, lines 55-65), when the recognition means

recognizes that the search result information shows the absence of at least one device (col. 20, lines 20-55; col. 22, lines 60-67).

Salgado does not explicitly discloses "second request means for requesting said server unit to execute a second search in accordance with a part of the number of attributes used for the first search in order to search for a desired device on the network, in response to a recognition by the recognition means that the result information shows the absence of at least one device".

Lizee discloses a recognition means for recognizing whether result information obtained from the first search executed by said server unit shows a presence or an absence of at least one device (col. 6, lines 1-10); second request means for requesting said server unit to execute a second search [in accordance with a part of the number of attributes used for the first search in order to search for a desired device on the network], in response to a recognition by the recognition means that the result information shows the absence of at least one device (col. 6, lines 3-15; Fig. 1A).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify Salgado to implement Lizee's automatically relaxable query. One of ordinary skill in the art would have been motivated to do this because it would allow a query to disregard conditions that returns an empty result set which would provide faster processing times (col. 2, lines 50-55).

As Applicant has previously argued, neither Lizee not Salgado disclose that the second search executes in accordance with a part of the number of attributes used for the first search. However, Gauch teaches a method of querying databases wherein

additional searches can be made using at least one attribute obtained from the previous

search (page 263, "Flow of Control" and "Expanding a concept"; and Figure 3). It would

have been obvious to one of ordinary skill in the art at the time the invention was made

to allow the ability to implement the search broadening/narrowing ability of Gauch into

the system of Salgado in view of Lizee. The motivation for doing so would be to

improve search results (Gauch, Abstract).

Referring to Claims 15, 24, 33, 50, 57:

Salgado discloses an apparatus for searching a database in accordance with a

query from a client unit, said apparatus comprising: execution means for executing a

search in accordance with a search request from the client unit (col. 18, line 65-col. 19,

line 25); database control means for controlling a database in which information for

identifying a device on a network and information for various attributes of the device are

registered, and for controlling execution of the search for the device in accordance with

the search request from the client unit (col. 19, lines 1-30); reception means for

receiving from the client unit a first search for a device which satisfies a number of

attributes on the network (col. 19, lines 10-15); obtaining means for obtaining at least

one attribute for use in a second search from the number of attributes for the first search

(col. 19, lines 15-25; Fig 10, block 232); search means for executing the second search

for a device satisfying the at least one attribute obtained by said obtaining means (col.

19, lines 10-30), and output means for outputting a search result from the first search

when said recognition means recognizes that the result information shows the presence

of at least one device (col. 19, lines 38-43), and for outputting a search result from the

second search, which shows, for each device completely meeting attributes used for the

second search, that the device meets the attributes used for the second search (col. 22,

lines 49-62), and shows for each device incompletely meeting the attributes used for the

second search, at least one of the attributes that the device meets and a remainder of

the attributes distinguishably from each other (col. 22, lines 55-65), when said

recognition means recognizes that the result information shows the absence of at least

one device (col. 20, lines 20-55; col. 22, lines 60-67).

Salgado does not explicitly disclose "search means for executing the second

search for a device satisfying the at least one attribute obtained by said obtaining

means, in response to a recognition by said recognition means that the search result

information shows the absence of at least one device", although the argument can be

made that the user is itself capable of recognizing that the search results do not contain

the desired device, as the results are reported to the user in a conventional fashion (see

col. 20, lines 20-55).

Lizee discloses a recognition means for recognizing whether result information

obtained from the first search shows a presence or an absence of at least on device;

obtaining means for obtaining at least one attribute for use in a second search from the

number of attributes for the first search (col. 6, lines 1-10); search means for executing

the second search for a device [satisfying the at least one attribute obtained by said

obtaining means], in response to a recognition by said recognition means that the

search result information shows the absence of at least one device (col. 6, lines 3-15;

Fig. 1A).

At the time the invention was made, it would have been obvious to a person of

ordinary skill in the art to modify Salgado to implement Lizee's automatically relaxable

query. One of ordinary skill in the art would have been motivated to do this because it

would allow a query to disregard conditions that returns an empty result set which would

provide faster processing times (col. 2, lines 50-55).

As Applicant has previously argued, neither Lizee not Salgado disclose that the

second search satisfies at least one attribute obtained by said obtaining means.

However, Gauch teaches a method of querying databases wherein additional searches

can be made using at least one attribute obtained from the previous search (page 263,

"Flow of Control" and "Expanding a concept"; and Figure 3). It would have been

obvious to one of ordinary skill in the art at the time the invention was made to allow the

ability to implement the search broadening/narrowing ability of Gauch into the system of

Salgado in view of Lizee. The motivation for doing so would be to improve search

results (Gauch, Abstract).

Referring to Claims 61, 65, 69 and 70:

Salgado discloses a device search apparatus comprising: a first display unit,

adapted to display result information obtained from a device search executed under a

first search condition in which a number of attributes are designated (col. 19, lines1-10)

a request unit, adapted to request a device search under the second search condition

(col. 19, lines 14-30); and a second display unit, adapted to display, for each device completely meeting the second search condition, that the device meets the second search condition (col. 22, lines 49-62), and to display, for each device incompletely meeting the second search condition, at least one attribute in the second search condition that the device meets and other ,attributes distinguishably from each other (col. 22, lines 55-65).

Salgado does not explicitly disclose an extraction unit, adapted to extract a part of the number of attributes designated in the first search condition for use as a second search condition.

Lizee and Gauch disclose an extraction unit, adapted to extract a part of the number of attributes designated in the first search condition for use as a second search condition (Lizee: col. 6, lines 1-10; Gauch: page 262, "Query Reformation techniques" and "Expanding concepts").

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify Salgado to implement Lizee's automatically relaxable query and Gauch's ability to reform and refine queries. One of ordinary skill in the art would have been motivated to do this because it would allow a query to disregard conditions that returns an empty result set which would provide faster processing times (Lizee, col. 2, lines 50-55), while improving the quality of search results (Gauch, Abstract).

Referring to Claims 3, 12, 17, 21, 46:

Salgado in view of Lizee and Gauch discloses the limitations as discussed in

Claims 1, 10, 15, 19, and 44 above. Salgado further discloses the output means

selectively outputs the search result from the first search or the search result from the

second search (col. 19, lines 10-30).

Referring to Claim 5:

Salgado in view of Lizee and Gauch discloses the limitations as discussed in

Claim 1. Salgado further discloses storing symbol information, including graphical icon

information, corresponding to an attribute used for the first search, and when the search

result form the second search is outputted and when the information showing the

presence or an absence of at least one device found in the first search is outputted, a

presence or an absence at least one device or each attribute of each device is shown in

accordance with a display mode of the graphical icon corresponding toe ach attribute

(col. 19, line 50-col. 20, line 35).

Referring to Claim 18:

Salgado in view of Lizee and Gauch discloses the limitations as discussed in

Claim 17. Salgado further discloses control means returns the search result from the

first search to the client unit when a device to be outputted as the search result is

present, and returns the search result from the second search to the client unit when a

device to be outputted as the search result is not present (Fig 10; col. 19, lines 35-45).

Referring to Claim 63 and 67:

Salgado in view of Lizee and Gauch discloses the limitations as discussed in

Claims 61 and 65 above. Lizee further discloses a recognition unit, adapted to

recognize whether at least one device that meets the first search condition has been

found (col. 6, lines 1-10), wherein said extraction unit extracts a part of the number of

attributes designated in the first search condition in response to a recognition result by

said recognition unit (col. 6, lines 3-10).

Referring to Claims 64 and 68:

Salgado in view of Lizee and Gauch discloses the limitations as discussed in

Claims 61 and 65 above. Salgado further discloses devices found in the device search

under the first and second search conditions are displayed distinguishably from each

other (col. 19, lines 10-25).

8.   Claims 11, 13-14, 16, 20, 22-23, 25-27, 37-43, 45, 47-49 and 51-54, 62 and 66

are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5872869 issued to

Salgado, herein referred to as Salgado in view of US 5671404 issued to Lizee et al,

herein referred to as Lizee further in view of US 6348971 issued to Owa et al herein

referred to as Owa.

Referring to Claims 11, 16, 20, 25, 45 and 51:

Salgado in view of Lizee and Gauch discloses the limitations as discussed in

Claims 10, 15, 19, 24, 44 and 50 above.

Salgado in view of Lizee and Gauch does not explicitly disclose "attributes for

device controlled by the database include an indispensable attribute registered

whenever a device is registered in the database and attributes other than an

indispensable attribute, and said second request means extracts only the indispensable

attribute from the number of attributes used for the first search in order to request the

second search."

Owa discloses attributes for device controlled by the database include an

indispensable attribute registered whenever a device is registered in the database and

attributes other than an indispensable attribute (col. 5, lines 5-10, 49-53), and said

second request means extracts only the indispensable attribute from the number of

attributes used for the first search in order to request the second search (col. 6, lines 6-

15).

At the time the invention was made, it would have been obvious to a person of

ordinary skill in the art to modify the teachings of Salgado and Lizee such that an

indispensable attribute is part of both a first and second search. One of ordinary skill in

the art would have been motivated to do this because it would link the first and

subsequent search criteria, and it would enable the user to decide which conditions or

attributes are important (col. 5, lines 45-50).

Referring to Claims 62 and 66:

Salgado in view of Lizee and Gauch discloses the limitations as discussed in
Claims 61 and 65 above.

Salgado in view of Lizee and Gauch does not explicitly disclose "wherein the
number of attributes designated in the first search condition include an indispensable
attribute and an optional attribute, and an attribute extracted by said extraction unit for
the second search condition are defined as an indispensable attribute."

Owa discloses wherein the number of attributes designated in the first search
condition include an indispensable attribute and an optional attribute (col. 5, lines 5-10,
49-53), and an attribute extracted by said extraction unit for the second search condition
are defined as an indispensable attribute (col. 6, lines 6-15).

At the time the invention was made, it would have been obvious to a person of
ordinary skill in the art to modify the teachings of Salgado and Lizee such that an
indispensable attribute is part of both a first and second search. One of ordinary skill in
the art would have been motivated to do this because it would link the first and
subsequent search criteria, and it would enable the user to decide which conditions or
attributes are important (col. 5, lines 45-50).

Referring to Claims 13, 22 and 47:

Salgado, Lizee, and Gauch in view of Owa disclose the limitations as discussed
in Claims 11, 20 and 45. Salgado further discloses output means outputs device names

and information that shows attributes satisfied by the devices so that the user may

select a desired one of the devices (col. 17, line 65-col. 18, line 10).

Referring to Claims 14, 23 and 48:

Salgado, Lizee, and Gauch in view of Owa disclose the limitations as discussed

in Claims 11, 20 and 45. Salgado further discloses storing symbol information,

including graphical icon information, corresponding to an attribute used for the first

search, and when the search result form the second search is outputted and when the

information showing the presence or an absence of at least one device found in the first

search is outputted, a presence or an absence at least one device or each attribute of

each device is shown in accordance with a display mode of the graphical icon

corresponding toe ach attribute (col. 19, line 50-col. 20, line 35).

Referring to Claims 26 and 52:

Salgado, Lizee, and Gauch in view of Owa disclose the limitations as discussed

in Claims 25 and 51 above. Salgado further discloses the output means selectively

outputs the search result from the first search or the search result from the second

search (col. 19, lines 10-30).

Referring to Claims 27 and 53:

Salgado, Lizee, and Gauch in view of Owa disclose the limitations as discussed

in Claims 26 and 52. Salgado further discloses control means returns the search result

from the first search to the client unit when a device to be outputted as the search result

is present, and returns the search result from the second search to the client unit when

a device to be outputted as the search result is not present (Fig 10; col. 19, lines 35-45).

Referring to Claims 37-43, 49, 54:

Salgado, Lizee, and Gauch discloses the limitations as discussed in Claims 1,

10, 15, 19, 24, 28, 33, 44, and 50 above.

Salgado, Lizee, and Gauch does not explicitly disclose the second search is

executed based on at least one of a color printing attribute, a finishing attribute, and a

print layout attribute, and the output means displays on a display unit at least one printer

identifier that corresponds to a printer found in the second search.

Owa discloses the second search is executed based on at least one of a color

printing attribute, a finishing attribute, and a print layout attribute, and the output means

displays on a display unit at least one printer identifier that corresponds to a printer

found in the second search (col. 5, lines 1-5; col. 6, lines 10-40).

At the time the invention was made, it would have been obvious to a person of

ordinary skill in the art to modify the teachings of Salgado such that printing attributes

are used in the second search. One of ordinary skill in the art would have been

motivated to do this because it would allow the user to find a printer with the specified

attributes (col. 6, lines 50-65).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Gyorfi whose telephone number is (571) 272-3849. The examiner can normally be reached on 8:30am - 5:00pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TAG
7/14/05

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